

Kidney dysfunction linked to heart failure with preserved ejection fraction

December 20 2023, by Elana Gotkine



Mild and moderate kidney dysfunction are associated with left ventricular diastolic dysfunction and heart failure with preserved ejection fraction (HFpEF), according to a study published online Nov.

27 in *ESC Heart Failure*.

Robin W.M. Vernooij, Ph.D., from Utrecht University in the Netherlands, and colleagues examined the association between kidney dysfunction and left ventricular diastolic dysfunction parameters and HFpEF. Estimated [glomerular filtration rate](#) (eGFR) was calculated based on creatinine and cystatin C without race. Multivariable adjusted regression models were used to test the association between eGFR and E/e', left ventricular mass index, relative wall thickness, and stage C/D heart failure. Data were included for 880 participants with a mean age of 62.9 years; 406 participants had mild or moderate kidney dysfunction (37.6 and 8.5%, respectively).

The researchers found that the prevalence of HFpEF was significantly higher in those with mild and moderate kidney dysfunction versus those with normal kidney function (10.3 and 16.0%, respectively, versus 3.4%). There was an association observed for higher E/e' and higher relative wall thickness values with a lower kidney function. Compared with those with normal kidney function, those with moderate kidney dysfunction had a higher likelihood of American College of Cardiology/American Heart Association stage C/D [heart failure](#) (odds ratio, 2.07).

"We found an association between moderate and mild kidney dysfunction, and diastolic dysfunction and HFpEF, independent of other [risk factors](#)," the authors write. "This association was already present for mild kidney dysfunction, and stronger for moderate [kidney dysfunction](#)."

More information: Robin W. M. Vernooij et al, Association of mild kidney dysfunction with diastolic dysfunction and heart failure with preserved ejection fraction, *ESC Heart Failure* (2023). [DOI: 10.1002/ehf2.14511](#)

Copyright © 2023 [HealthDay](#). All rights reserved.

Citation: Kidney dysfunction linked to heart failure with preserved ejection fraction (2023, December 20) retrieved 13 May 2024 from <https://medicalxpress.com/news/2023-12-kidney-dysfunction-linked-heart-failure.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.